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AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
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ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
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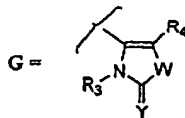
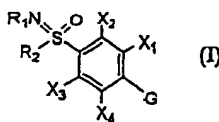
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- with international search report
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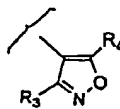
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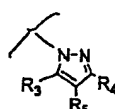
(54) Title: 4-(HETEROCYCLYL)-BENZENESULFOXIMINE COMPOUNDS FOR THE TREATMENT OF INFLAMMATION



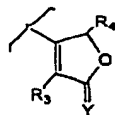
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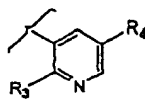
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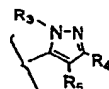
(C)



(D)



(E)



(F)

(57) Abstract: The present invention describes novel compounds of formula (I) having antiinflammatory activity, process for their preparation and pharmaceutical composition containing them.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IN 03/00133

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D231/12 C07D401/04 C07D307/46 C07D263/38 C07D277/34
C07D261/08 A61K31/34 A61K31/415 A61K31/42 A61K31/425
A61K31/44 A61P29/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PUIG, CARLES ET AL: "Synthesis and Biological Evaluation of 3,4-Diaryloxazolones: A New Class of Orally Active Cyclooxygenase-2 Inhibitors" JOURNAL OF MEDICINAL CHEMISTRY (2000), 43(2), 214-223, XP002251891 chart 1, p.214; Table 1, p.217 --- -/--	1-21



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search

8 September 2003

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/IN 03/00133

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PENNING, THOMAS D. ET AL: "Synthesis and Biological Evaluation of the 1,5-Diarylpyrazole Class of Cyclooxygenase-2 Inhibitors: Identification of 4-'5-(4-Methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-ylbenzenesulfonamide (SC-58635, Celecoxib" JOURNAL OF MEDICINAL CHEMISTRY (1997), 40(9), 1347-1365, XP002114833 the whole document ----	1-21
A	SHIN, S. S. ET AL: "2,2-Dimethyl-4,5-diaryl-3(2H)furanone derivatives as selective cyclo-oxygenase-2 inhibitors" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS (2001), 11(2), 165-168, XP004314839 the whole document ----	1-21
A	FRIESEN, RICHARD W. ET AL: "2-Pyridinyl-3-'4-(methylsulfonyl) phenyl 1 pyridines: selective and orally active cyclooxygenase -2 inhibitors" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS (1998), 8(19), 2777-2782, XP004139619 compounds 1-3, p.2777 table 1 ----	1-21
Y	US 6 020 343 A (BELLEY, MICHEL ET AL) 1 February 2000 (2000-02-01) claims 1,37-42 ----	1-21
A	US 5 859 257 A (TALLEY, JOHN J.) 12 January 1999 (1999-01-12) column 95 -column 98; claim 1 ----	1-21
Y	WO 01 083475 A (J. URIACH & CIA S.A., SPAIN) 8 November 2001 (2001-11-08) claims 1,4,11-15 ----	1-21
Y,P	EP 1 251 126 A (PHARMACIA CORPORATION, USA) 23 October 2002 (2002-10-23) claims 1,5-7,113-117 -----	1-21

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IN 03/00133

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 9-12, 17 and 18 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IN 03/00133

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5859257	A		RU 2200158 C2	10-03-2003
			WO 9625405 A1	22-08-1996
			US 5985902 A	16-11-1999
			ZA 9601150 A	12-02-1997
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			AU 4838201 A	12-11-2001
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			EP 1281709 A1	05-02-2003
			WO 0183475 A1	08-11-2001
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			US 2003114456 A1	19-06-2003
EP 1251126	A	23-10-2002	EP 1251126 A2	23-10-2002
			US 2003032657 A1	13-02-2003
			US 2003149078 A1	07-08-2003

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claim 1 relates to an extremely large number of possible compounds. In fact, the claim contains so many options, particularly due to the use of the terms "their analogs, their derivatives" that a lack of clarity (and/or conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claim impossible.

Consequently, the search has been carried out for those parts of the application which do appear to be clear (and/or concise), namely the compounds of formula (I) according to claim 1, for which G is A, B, C, D, E and F and those compounds recited in the examples of the application.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.